



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/215,095	12/18/1998	NATHANIEL T. BECKER	GC507-2	7801

5100 7590 04/30/2003

GENENCOR INTERNATIONAL, INC.  
ATTENTION: LEGAL DEPARTMENT  
925 PAGE MILL ROAD  
PALO ALTO, CA 94304

EXAMINER

BORIN, MICHAEL L

ART UNIT	PAPER NUMBER
----------	--------------

1631

DATE MAILED: 04/30/2003

44

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.  
09/215,095

Applicant(s)  
Becker et al

Examiner  
Michael Borin

Art Unit  
1631



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Mar 13, 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 66-107 is/are pending in the application.
- 4a) Of the above, claim(s) 70, 71, and 77 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 66-69, 72-76, and 78-107 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_ 6) ☐ Other:

Art Unit: 1631

## DETAILED ACTION

### *Status of claims*

1. Amendment filed 03/15/2003 is acknowledged. Claims 101-107 are added. Claims 66,83 are amended. Claims 66-107 are pending. Claims 70, 71, 77 remain withdrawn from consideration as drawn to non-elected species.
2. "New matter" rejection of claims 66-69, 72-76, 78-100 under 35 U.S.C. 112, first paragraph, is withdrawn in view of amendment to the claims removing term "non-fibrous" in regard to polysaccharide.

### ***Claim Rejections - 35 USC § 112, second paragraph.***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 107 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter

Art Unit: 1631

which applicant regards as the invention. The claim depends on non-existent claim 109.

***Claim Rejections - 35 USC § 103***

4. Claims 66-69, 72-76, 78-107 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Arnold et al. (US Patent 5,324,649). The rejection is maintained for the reasons set forth for claims 66-69, 72-76, 78-100 in the previous Office action, and in view of the following.

Newly submitted claims 100-107 contain limitations drawn to types of enzyme, barrier layer and coating. As was stated in the rejection, if there are any differences between Applicant's claimed granules and that of the prior art, the differences would be appear minor in nature. Selection of particular enzymes, barrier layer and coating materials would be obvious for an artisan to be achieved in a way of ordinary optimization.

Further, claims 83, 106 introduce limitation that enzyme matrix constitutes 20 = 80% by weight of the granule. Arnold teaches that enzyme layer comprises 5-70% by weight of the granule (col. 6, lines 19-23).

Response to arguments.

Art Unit: 1631

Applicant contrasts "matrix" claimed in the instant invention vs. "enzyme fermentation slurry" used in the reference. However, according to the instant specification, "matrix" is a "protein mixed together with a combination of sugar or sugar alcohol, and a structuring agent". Similarly, Arnold teaches that enzyme "layer" (or matrix) contains, besides the enzyme itself, other peptides and proteins (col. 5, line, and plastisizers, such as sugars or sugar alcohols (col. 6, lines 13,14), and adjunct ingredients, in particular enzyme protective agents. Therefore, Examiner views both "matrix" of the instant invention and "slurry" of the reference as protein mixtures layered around a seed in the described granules. Further, as stated in the rejection, it would be obvious to add to the referenced granules an enzyme protective agents, such as polysaccharide (starch), which is a missing component in the referenced granules compared to the instantly claimed.

Further, applicant argues that if additional ingredients were selected from the list of column 7, the granule would not have a matrix of protein, sugar and polysaccharide. Examiner disagrees. As described above (and in the original rejection), the referenced granule is similar to the claimed except for the presence of polysaccharides. Selection of the latter, however, is obvious as the reference suggests using enzyme protective agents, and one of enzyme protective agents commonly used in the art is starch (i.e., a polysaccharide).

Art Unit: 1631

Applicant further argues that even if polysaccharide component is selected, the sugar component might not be there in the granule. The reference, however, does not propose to use the adjunct ingredients in the alternative; rather, it suggests that any ingredients can be used; their selection would be obvious to an artisan as a process of routine optimization.

In response to applicant's assertion that the rejection is based upon an "obvious to try" scenario, it is clear in the rejection that one of ordinary skills in the art would have been motivated to apply the combined teachings of the references. The references are all related to enzyme-containing granules and methods of their making, the selection of ingredients is clearly suggested, and references taken in combination would have led one skilled in this art to make use of polysaccharide starch as an enzyme stabilizer in granules of Arnold with a reasonable expectation of success for improvement of quality of the referenced granules.

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 1631

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Borin whose telephone number is (703) 305-4506. Dr. Borin can normally be reached between the hours of 8:30 A.M. to 5:00 P.M. EST Monday to Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Michael Woodward, can be reached on (703) 308-4028. The fax telephone number for this group is (703) 305-3014.

Any inquiry of a general nature or relating the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0196.

April 29, 2003

MICHAEL BORIN, PH.D  
PRIMARY EXAMINER

mlb

